

**August 2000**  
**FACT SHEET**  
**NAVAJO TRIBAL UTILITY AUTHORITY (NTUA) - Pinon**  
**NPDES Permit No. AZ0024228**

I. Introduction

NTUA submitted an NPDES permit application, signed July 17, 1997, to the U.S. Environmental Protection Agency (EPA) Region 9 to discharge from the Pinon wastewater treatment lagoons. This is a new NPDES permit application. The NPDES permit issued will expire at midnight five years after its effective date.

Applicant address: Navajo Tribal Utility Authority  
P.O. Box 170  
Fort Defiance, AZ 86504

Facility contact: Harry Begaye  
(520) 729-5721, ext. 2208

II. Background

The NTUA-Pinon wastewater treatment lagoons are located in Pinon, Navajo County, Arizona, in the central portion of the Navajo Nation. The facility serves a population of about 5,000, receiving only domestic sewage with a design flow of 0.3 million gallons per Day (MGD). The facility is a four-cell facultative lagoon system. Transfer piping allows wastewater to flow in succession from Cell #1 to Cell #2, and Cell #3, and Cell #4. There is no pretreatment or aeration of the wastewater. This facility was originally designed as a total retention system to treat wastewater. However, the NTUA submitted a permit application because effluent may be discharged from Cell #4, which was constructed for wetland use and divided into three smaller compartments. The permittee has installed an effluent pipe and a gas chlorinator with a contact chamber. Current population served includes: an elementary school and a high school with an enrollment of 1,500 students, with 500 students being housed at the community dormitory; several governmental offices; a large grocery store; several trading posts; and other small businesses in the Pinon community. NTUA is now applying for an NPDES permit to discharge from Outfall No. 001, which would flow to Wepo Wash, a tributary to Polacca Wash, a tributary to the Little Colorado River. Any sampling and monitoring under the proposed permit shall be performed at the proposed Outfall No. 001.

EPA has determined that there are no endangered species of concern in the discharge area so no requirements specific to the protection of endangered species are contained in the proposed permit.

### III. Navajo Nation Water Quality Standards

Pursuant to the Water Quality Act of 1987 and the "EPA Policy for the Administration of Environmental Programs on Indian Reservations" (November 8, 1987), EPA will work directly with Indian Tribal governments on a one to one basis. This conforms with the Federal Indian Policy of January 24, 1983. The Navajo Nation has received Treatment as a State (TAS) for Section 106 of the Clean Water Act (CWA) but has not applied for TAS under Section 303. Section 106 grant money is used to develop water quality standards and use designations, which must be approved under Section 303 by EPA Region 9. On September 7, 1999, the Navajo Nation completed and adopted water quality standards for the nation's waters. These water quality standards along with a TAS application under Section 303 was submitted to EPA in November 1999. In the interim until the Navajo Nation's water quality standards are approved by EPA, those water quality standards will be used on a best professional judgment basis for purposes of developing water quality based effluent limitations.

### IV. Basis of Proposed Permit Requirements

The proposed discharge limitations are based on:

A. Secondary Treatment Regulations contained in 40 CFR Part 133, Sections 133.101 through 133.105, promulgated September 20, 1984, and most recently amended on January 27, 1989.

B. Navajo Nation Water Quality Standards, September 7, 1999.

### V. Designated Uses of the Receiving Water

The designated uses of the receiving water (Wepo Wash, a tributary to Polacca Wash, a tributary to the Little Colorado River) are defined by the Navajo Nation's water quality standards and include secondary human contact, ephemeral warm water habitat, and livestock and wildlife watering (p. 19).

### VI. Determination of Effluent Limitations, Monitoring, and Reporting Requirements

#### A. Flow Rates

Under the proposed permit, there is a daily maximum

discharge limit of 0.3 MGD and the flow must be monitored and reported. The flow limit is consistent with the previous permit. The monitoring frequency is once/month.

B. Five-Day Biochemical Oxygen Demand (BOD<sub>5</sub>)

Under the proposed permit, the discharge shall not exceed a daily maximum of 45 mg/l and a daily average of 65 mg/l BOD<sub>5</sub>, and shall achieve no less than a monthly average rate of 65% removal. These limits are required under 40 CFR Section 133.105(a).

Under 40 CFR Section 122.45(f), mass limits are required for BOD<sub>5</sub>. Based upon the 0.3 MGD flow, the mass limits for BOD<sub>5</sub> are based on the following calculations:

Monthly average

$$\frac{0.3 \text{ MG}}{\text{day}} \times \frac{45 \text{ mg}}{1} \times \frac{8.345 \text{ lb/MG}}{1 \text{ mg/l}} \times \frac{0.45 \text{ kg}}{1 \text{ lb}} = 50.70 \text{ kg/day}$$

Weekly average

$$\frac{0.3 \text{ MG}}{\text{day}} \times \frac{65 \text{ mg}}{1} \times \frac{8.345 \text{ lb/MG}}{1 \text{ mg/l}} \times \frac{0.45 \text{ kg}}{1 \text{ lb}} = 73.23 \text{ kg/day}$$

The daily maximum will also be monitored and reported. These limits are the same as those in the previous permit. The monitoring frequency is once/month.

C. Total Suspended Solids (TSS)

Under the proposed permit, the discharge shall not exceed a weekly average of 135 mg/l and monthly average of 90 mg/l TSS, and shall achieve no less than a monthly average rate of 65% removal. These limitations (Alternative State Requirements) are consistent with 40 CFR 133.101(f) and 133.105 (d). Mass limit requirements in accordance with 40 CFR 122.45(f) have also been set in the proposed permit. Mass loadings shall not exceed a 7-day average of 152.09 kg/day and a 30-day average of 101.40 kg/day. These limits are the same as those in the previous permit. The monitoring frequency is once/month.

D. Fecal Coliform

In the proposed permit, the monthly logarithmic

mean of fecal bacteria shall not exceed 400/100 ml, as a geometric average of samples collected during the calendar month, and 200/100 ml as a single sample maximum. These limits are based on Navajo Nation water quality standards for secondary human contact (p. 24) and are more stringent than those in the previous permit. The monitoring frequency is once/month.

E. Total Residual Chlorine (TRC)

The permit requires chlorination of the effluent before discharge. For the continuous discharge, no single sample shall exceed 11 ug/l for TRC. This limit is based on Navajo Nation water quality standards for aquatic, wildlife and livestock (p. 28). This limit is more stringent than that in the previous permit. The monitoring frequency is once/month.

F. Total Dissolved Solids (TDS)

The proposed permit requires a monitoring requirement for both the influent and effluent TDS. The monitoring frequency is once/quarter. The regulations at 40 CFR 122.44(i) allow requirement for monitoring as determined to be necessary.

G. Ammonia (as un-ionized NH<sub>3</sub>)

The proposed permit requires a monitoring requirement for ammonia. The monitoring frequency is once/quarter. If analytical results for the first four quarters reveal ammonia levels are below EPA's National Water Quality Criteria for ammonia, the monitoring frequency will decrease to once/year. The regulations at 40 CFR 122.44(i) allow requirement for monitoring as determined to be necessary.

H. pH

The proposed permit requires that effluent pH not fall below 6.5 or above 9.0 standard pH units, consistent with the Navajo Nation water quality standards. The monitoring frequency is once/month.

I. Reporting

The proposed permit requires discharge data obtained during the previous three months to be

summarized and reported monthly. If there is no discharge for the month, indicate "Zero Discharge". These reports are due January 28, April 28, July 28, and October 28 of each year. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator and the Navajo Nation.

#### J. General Standards

The proposed permit sets general standards that are narrative water quality standards contained in the Navajo Nation Water Quality Standards, Section 203. These general standards are set forth in Section B. General Discharge Specifications of the permit.

#### VII. Permit Reopener

At this time, there is no reasonable potential to establish any other water quality-based limits. Should any monitoring indicate that the discharge causes, has the reasonable potential to cause, or contributes to excursion above a water quality criteria, the permit may be reopened for the imposition of water quality-based limits and/or whole effluent toxicity limits. This permit may be modified, in accordance with the requirements set forth at 40 CFR 122.44 and 124.14, to include appropriate conditions or limits to address demonstrated effluent toxicity based on newly available information, or to implement any EPA-approved new Tribal water quality standards.

#### VIII. Biosolids Requirements

The permittee shall submit a report 60 days prior to disposal of biosolids. The report shall discuss the quantity of biosolids produced, the treatment applied to biosolids including process parameters, disposal methods, and, if land applied, analyses for Arsenic, Cadmium, Chromium, Copper, Lead, Molybdenum, Nickel, Zinc, and Selenium expressed in mg/kg dry biosolids. The permittee shall comply with all standards for biosolids use and disposal of Section 405(d) of the CWA, and 40 CFR Parts 257, 258 and 503.

#### IX. Written Comments

Persons who wish to comment upon, object to the proposed action, or request a public hearing pursuant to 40 CFR Section 124.11 should submit their comments and requests in writing within thirty (30) days from the date of the Public Notice, either in person or by mail to:

U.S. Environmental Protection Agency, Region IX  
CWA Standards and Permits Office (WTR-5)  
Attn: Linh Tran  
75 Hawthorne Street  
San Francisco, CA 94105  
Telephone: (415) 744-1901

#### X. Information and Copying

The Administrative Record, which contains the draft NPDES permit, the fact sheet, comments received, and other relevant documents, is available for review and may be obtained by calling or writing to the above address.

All comments or objections received within thirty (30) days from the date of the Public Notice, will be retained and considered in the formulation of the final determination regarding the permit issuance.

#### XI. Public Hearing

When public interest warrants, the Regional Administrator shall hold a public hearing and such notice of hearing shall be issued by public notice at least thirty (30) days prior to the hearing date. A request for a public hearing must be in writing and must also state the nature of the issue proposed to be raised in the hearing.